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CLAIMS:

5    1.      A medical viewing system comprising data acquisition means and data processing
means for acquiring and processing image data in an image of an object whose surface
comprises at least a folded portion, said data processing means comprising:
        segmentation means for segmenting the image data whereby to identify the object
surface;
10          processing means for approximating said segmented object surface data for
determining a reference surface, which represents an approximated surface of said object
surface devoid of the folded portions while comprising at least one flat patch;
        analysing means for determining points, for each patch of the reference surface,
where the normal to the patch intersects the object surface and for identifying as a patch
15   corresponding to a folded portion a patch of the reference surface that has a normal
intersecting the object surface at more than one point;
said medical viewing system further comprising image visualisation means for visualising the
object images and/or the processed images.

20   2.      The medical viewing system of Claim 1, further comprising data processing means
for assigning, to the patches corresponding to the folded portions, called fold-portion patches,
code values adapted to produce a first visual indication, at locations corresponding to said
fold-portion patches, when image data corresponding to the reference surface is visualised.

25   3.      The medical viewing system of one of Claims 1 or 2, further comprising data
processing means for determining fold-attribute data relating to patches of the reference
surface identified as fold-portion patches.

     4.      The medical viewing system of Claim 3, wherein the determined fold-attribute data
30   includes the number of points at which the normal to the patch of the reference surface
crosses the object surface and/or the respective distances between the reference surface and
the points at which the normal to the patch of the reference surface crosses the object surface
and/or the distance between selected points at which the normal to the patch of the reference
surface crosses the object surface.

5.      The medical viewing system of one of claims 3 or 4, wherein the data processing means for identifying the patch corresponding to the fold-portion and the data processing means for determining the fold-attribute data comprises threshold means to take into account only points no further than a threshold distance away from the reference surface.

6.      The medical viewing system of any one of Claims 3 to 5, further comprising selection means for selecting one or more types of fold-attribute data, when image data corresponding to the reference surface is visualised.

7.      The medical viewing system of Claim 6, further comprising coding means for assigning, to the selected one or more types of fold-attribute data, code values adapted to produce a respective different second visual indication, at locations corresponding to said fold-portion patches, when image data corresponding to the reference surface is visualised.

8.      The medical viewing system of any one of claims 3 to 7, further comprising data processing means for:

providing a database of potential abnormalities and associated sets of fold-attribute data;

comparing fold-attribute data determined for the fold-portion patches with one or more of the sets of fold-attribute data of the database and, when a match is found for a first fold-portion patch, associating a potential-abnormality-flag with the first fold-portion patch.

9.      The medical viewing system of one of claims 1 to 8, wherein the image visualisation means comprises a display device and/or a printing device.

10.     The medical viewing system of one of claims 1 to 9, implemented as a specially programmed general-purpose computer.

11.     An image processing method to cause the data processing means of the medical viewing system of one of Claims 1 to 10 to perform steps of acquiring and processing image data in an object image of an object whose surface comprises at least a folded portion, wherein processing comprises:

segmenting the image data whereby to identify the object surface;

processing the object surface data for determining a reference surface, which represents an approximated surface of the object surface devoid of folded portions while comprising at least one flat patch;

for each patch of the reference surface, determining points where the normal to the

5    patch intersects the object surface; and

identifying as a patch corresponding to a folded portion a patch of the reference surface that has a normal intersecting the object surface at more than one point.

12.    A medical examination apparatus comprising acquisition means for acquiring medical

10   image data, imaging means for displaying the medical images, and a medical viewing system according to one of Claims 1 to 10.

13.    A computer program product having a set of instructions, when in use on a general-purpose computer, to cause the computer to perform the steps of the method according to

15   Claim 11.